

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
22 November 2001 (22.11.2001)

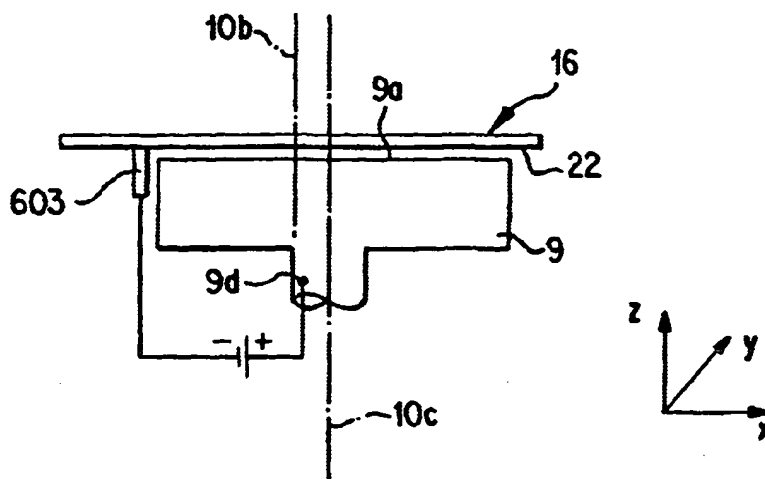
PCT

(10) International Publication Number
WO 01/88954 A2

- (51) International Patent Classification: H01L (74) Agent: DIFENDORF, Richard, R.; Evenson, McKee-own, Edwards & Lenahan, P.L.L.C., 1200 G Street, N.W., Suite 700, Washington, DC 20005 (US).
- (21) International Application Number: PCT/US01/12578
- (22) International Filing Date: 18 April 2001 (18.04.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/203,944 12 May 2000 (12.05.2000) US
09/735,546 14 December 2000 (14.12.2000) US
- (71) Applicant: NU TOOL INC. [US/US]; 1645 McCandless Drive, Milpitas, CA 95035 (US).
- (72) Inventors: ASHJAEI, Jalal; 10046 Crescent Road, Cupertino, CA 95014 (US). NAGORSKI, Boguslaw, A.; 3532 Calvelli Court, San Jose, CA 95124 (US). BASOL, Bulent, M.; 3001 Maple Avenue, Manhattan Beach, CA 90266 (US). TALIEH, Homayoun; 2211 Bentley Ridge Drive, San Jose, CA 95138 (US). UZOI, Cyprian; 625 Parvin Drive, Milpitas, CA 95035 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SI, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:
— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: METHOD OF AND APPARATUS FOR MAKING ELECTRICAL CONTACT TO WAFER SURFACE FOR FULL-FACE ELECTROPLATING OR ELECTROPOLISHING



(57) Abstract: Deposition of conductive material on or removal of conductive material from a wafer frontal side of a semiconductor wafer is performed by providing an anode having an anode area which is to face the wafer frontal side, and electrically connecting the wafer frontal side with at least one electrical contact, outside of the anode area, by pushing the electrical contact and the wafer frontal side into proximity with each other. A potential is applied between the anode and the electrical contact, and the wafer is moved with respect to the anode and the electrical contact. Full-face electroplating or electropolishing over the wafer frontal side surface, in its entirety, is thus permitted.